The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A drum structure for engagement within the interior of a retort apparatus having an outer shell, said drum structure comprising:

(a) a generally cylindrical drum sized to be closely receivable within the outer shell, said drum having an inside surface and an outside surface and being perforated about a substantial portion of its surface area to allow passage of fluids into and out of the drum during operation of the retort apparatus;

(b) one or more reinforcing structures for the drum secured to the drum to enhance one or more strength components of the drum selected from the group consisting of the bending strength of the drum, the torsion strength of the drum and the hoop strength of the drum.

2. A drum structure according to Claim 1, wherein the reinforcing structure comprises a plurality of spaced-apart reinforcing walls disposed transversely to the longitudinal axis of the drum and intersecting the inside surface of the drum, the central portions of the reinforcing walls being open for receiving products to be processed by the retort apparatus.

3. A drum structure according to Claim 2, wherein the reinforcing walls are substantially uniformly spaced apart along the length of the drum.

4. A drum structure according to Claim 3, wherein the drum is adapted to receive containers containing product to be processed within the retort apparatus, wherein the central open portion of the reinforcing wall is adapted for receiving said containers.

5. A drum structure according to Claim 4, wherein the openings formed in the reinforcing walls are substantially centrally located relative to the circumference of the reinforcing walls.

6. A drum structure according to Claim 4, wherein the containers are disposed in baskets receivable within the drum in stacked relationship to each other; and wherein the openings of the reinforcing members are sized to allow passage of the baskets into and out of the drum.

7. A drum structure according to Claim 2, wherein the reinforcing structure further comprising one or more reinforcing rings fixed to one or both of the inside surface and outside surface of the drum.

8. A drum structure according to Claim 7, wherein the reinforcing rings are attached to one or both end portions of the drum.

9. A drum structure according to Claim 8, further comprising reinforcing rings spaced along the length of the drum.

10. A drum structure according to Claim 7, wherein the reinforcing ring is attached to the drum by an attachment mode selected from the group consisting of welding, bolting and clamping.

11. A drum structure according to Claim 2, wherein the reinforcing structure further comprising one or more reinforcing members disposed generally lengthwise of the drum.

12. A drum structure according to Claim 1, wherein the reinforcing structure comprising one or more reinforcing members extending lengthwise of the drum.

13. A drum structure according to Claim 1, wherein the perforations therein are shaped in the form of one or more shapes selected from the group consisting of circles, squares, triangles, ovals and slots.

14. An agitating retort, comprising:

a retort outer shell;

a drum structure sized and shaped to be receivable within the shell and to be rotatable relative to the shell, said drum structure comprising:

a generally cylindrically shaped drum being perforated about a substantial portion of its surface area to allow processing fluids into and out of the drum during operation of the retort; and

one or more reinforcing substructures fixed to the interior and/or exterior of the drum to enhance the structural strength of the drum.

15. An agitating retort according to Claim 14, wherein said reinforcing substructures comprise a plurality of spaced-apart transverse walls disposed within the

drum and fixed to the drum, said transverse walls having openings formed therein for receiving into the drum products to be processed by the retort apparatus.

16. An agitating retort according to Claim 15, wherein the openings in the transverse walls are adapted to receive containers containing products to be processed within the retort.

17. An agitating retort according to Claim 16, wherein the containers are disposed in baskets receivable within the drum, the containers being stacked in relationship to each other within the baskets, and wherein the openings in the transverse walls are sized to allow passage of the baskets into and out of the drum.

18. An agitating retort according to Claim 15, wherein said reinforcing substructures further comprising one or more reinforcing rings extending circumferentially relative to the drum.

19. An agitating retort according to Claim 15, wherein said reinforcing substructures further comprising one or more reinforcing members extending lengthwise of the drum.

20. An agitating retort according to Claim 14, wherein the reinforcing substructures comprising one or more reinforcing rings attached to one or both of the inside surface and outside surfaces of the drum.

21. An agitating retort according to Claim 20, wherein the reinforcing rings are spaced apart along the length of the drum.

22. An agitating retort according to Claim 14, wherein the reinforcing substructures comprising one or more reinforcing members extending lengthwise of the drum.

23. An agitating retort according to Claim 14, wherein the perforations in the drum are in the shape of one or more shapes selected from the group consisting of circles, squares, triangles, ovals, and slots.